

NPR expenditures forecasting method, system and computer program

The invention relates to a method of generating an estimate for non-product related expenditures, to a system for generating such an estimate and to a computer program product.

5

One of the most important aspects of any business is planning which components, supplies and other expenditures are needed. Such planning typically involves making an estimate of future product sales, and deriving therefrom an estimate of what components need to be bought to manufacture a sufficient number of products. It is of course
10 important that such an estimate is made with great accuracy.

When such an estimate is made for product-related expenditures, the Bill of Materials (BOM) can be used to derive an accurate estimate. The BOM identifies for each product which components are included and in what quantity. If an accurate prediction of the number of products to be sold is known, then it is easy to derive how many specimens of
15 each of the components are to be bought and how much the total cost of this purchasing operation is going to be. And given a BOM and a report of past sales, an accurate estimate of the costs in that same period can be made.

However, a business does not have only product-related expenditures. So-called non-product related (NPR) purchases also occur. NPR communities cover:
20 accommodation, personnel, marketing communications, distribution, IT, travel & hospitality, professional services and production and development. Since these NPR communities often represent a large amount of money, it is desirable to produce an accurate estimate of these NPR expenditures. But without anything like a BOM available, it is difficult to obtain such an estimate.

25 In practice, forecasting NPR expenditures turns out to be a very time-consuming process and the outcome is often seen as not being reliable. The main reason for this is that there is no reliable source of information from which the estimate can be derived with great accuracy. And without accurate input, there can be no accurate estimate.

It is an object of the invention to provide a method according to the preamble, which is more accurate than the known method.

This object is achieved according to the invention in a method comprising
5 transforming finance and accounting (F&A) data in NPR expenditures and deriving the estimate from the transformed data.

The invention is based on the insight that finance and accounting data is known as reliable within an organization, and often represents information that is relevant for generating the estimate of the NPR expenditures. The F&A data is updated on a regular basis,
10 and is used for reporting within an organization, to a higher hierarchy within a company and also to the outside world. This data can therefore be used to generate the estimate, although it is important to realize that some restrictions may apply. The inventor has found in practice that generating an estimate for NPR expenditures for a large electronics firm can be done according to the invention in less than one hour throughput time.

15 Preferably the method comprises linking the F&A data using respective general ledger accounts to respective NPR expenditures. The best way to realize the transformation is to link general ledger accounts available in accounting to characteristics of the NPR expenditures. This works best if the general ledger is categorized with cost control functionality (the nature of the expenditure), rather than categorized by functional
20 responsibilities (efficiency and capacity determinations).

To transform the F&A data, each relevant ledger account is identified as a certain NPR expenditure. This identification is expressed with a linkage of each general ledger account with a certain level in a certain classification scheme. Preferably, the classification scheme used is the Universal Standard Products and Services Classification
25 (UNSPSC). After linking, an overview can be produced of the NPR expenditures.

In a further embodiment the F&A data comprises forecasted F&A data and the estimate comprises a forecast of the NPR expenditures. As set out above, overview for actual NPR expenditures can easily be generated. Reports concerning actual F&A expenditures are with present-day ERP systems easy to obtain. If additionally forecasted F&A data is
30 available, then this forecasted information can also be used to estimate future NPR expenditures. The general approach will be the same. If the forecasted F&A data comprises a rolling forecast, then accordingly the forecast of the NPR expenditures also represents a rolling forecast. Similarly, if the forecasted F&A data comprises a budget, then the NPR expenditures also represents a budget.

In a further embodiment the method further comprises deduction at least one of: government subsidies, taxes, insurance payments, warranty-related costs, license payments, license income and contract research costs from the F&A data before transforming the F&A data. In practice, F&A data will often comprise data that is irrelevant for the purposes of making purchasing estimates. These figures should therefore be eliminated from the F&A data before it is transformed into NPR expenditures.

It is a further object of the invention to provide a computer program product arranged to cause a processor to execute the method according to the invention. Preferably, this computer program comprises a spreadsheet application. Using a spreadsheet application it is easy to make the necessary computations, to generate overview and presentations of the resulting estimate.

It is a further object of the invention to provide a computer system for generating an estimate for non-product related (NPR) expenditures, comprising means for obtaining finance and accounting (F&A) data, and means for transforming the F&A data into NPR expenditures to derive the estimate.

These and other aspects of the invention will be apparent from and elucidated with reference to the embodiments shown in the drawings, in which:

Fig. 1 schematically illustrates a preferred embodiment of the method according to the invention; and

Fig. 2 schematically shows a computer system.

Throughout the figures, same reference numerals indicate similar or corresponding features. Some of the features indicated in the drawings are typically implemented in software, and as such represent software entities, such as software modules or objects.

Fig. 1 schematically illustrates a preferred embodiment of the method according to the invention. Although the method is explained here in general terms, so that an employee in the accounting or purchasing department could execute it, it is to be understood that these steps are preferably executed by a computer system. This computer system will be explained in more detail with reference to Fig. 2 below.

An accounting department within a company maintains the necessary F&A data. So-called general ledger accounts (GLA) are used to classify and organize the accounting information. In step 101, those general ledger accounts are selected that are needed to obtain the desired estimate. Only those general ledger accounts where expenditures are booked which are related to NPR purchases should be selected. So general ledger entries regarding for instance government subsidies, taxes, insurance payments, warranty-related costs, license payments and/or income and contract research costs should be ignored.

In step 102 the selected general ledger accounts are linked with the NPR expenditures for which the estimate is to be generated, using a classification scheme. In the preferred embodiment this classification scheme is the Universal Standard Product and Services Classification (UNSPSC). The UNSPSC is a schema that classifies and identifies commodities. It is used in sell-side and buy-side catalogues and as a standardized account code in analyzing expenditures. It is managed and developed by the Electronic Commerce Code Management Association (ECCMA).

In step 103, the percentage of each general ledger account linked to a UNSPSC classification, or with a particular subcommodity, is computed. This percentage is preferably determined with the PivotTable functionality within Excel. One would link a GLA to a certain level of UNSPSC, preferable not using the lowest level of UNSPSC, as there is too much detail available at this level. In fact, this could mean that one were to link 1:n UNSPSC code to 1 (one) GLA code. After matching all GLAs to an UNSPSC code, it should be possible to determine what part of the total amount of NPR expenditures is linked to a certain UNSPSC code, for instance the consultancy GLA is linked to the consultancy UNSPSC code.

The Common PivotTable functionality realizes the ability to summarize data, for instance a table, containing information that is for some aspects related to one another. Using this PivotTable functionality it is possible to add up all GLA amounts related to a certain UNSPSC code, and to express this amount as a % of the total amount, as will now be explained with the help of this illustrative example.

Assume the total amount of NPR expenditures is EUR 100. The total amount spent on consultancy is EUR 10. This means that the percentage computed in step 103 for this GLA is 10%. Thereafter this percentage can be used for the determination of the actual and forecasted consultancy amount. This percentage is valid, if the F&A info is available on a higher aggregation level. This is definitely the case for the forecasted data.

The assumption is that in other organizations the forecasted data will be available on a higher level than GLA level. The percentage is also useful to determine future actual NPR expenditures. In other words, if you for instance determine once a year the percentage, you are then able to use this percentage the whole year.

5 The percentage calculated is based on the actual general ledger. The main reason that this transformation is also performed for actual F&A data is due to the fact that it is desired to be able to compare forecasted data with actual data. Actual NPR expenditures data is in some cases available within the purchasing environment.

10 A choice is then made whether the estimated to be generated should represent actual expenditures or forecasted expenditures. If an estimate of the actual NPR expenditures is desired, then in step 104 actual F&A data 105 is imported and processed. This data is then transformed, based on the above-mentioned link, into NPR expenditure data.

15 Similarly, if a forecast of NPR expenditures is desired, then in step 106 forecasted F&A data 107 is imported and processed just like the actual F&A data was processed in step 104. The forecasted F&A data may represent a rolling forecast. The resulting estimate will then subsequently represent a rolling forecast.

20 In step 108, an estimate of NPR expenditures is derived from the transformed F&A data, either the actual F&A data 105 or the forecasted data 107. The estimate can then be supplied to a purchasing department, where it is used in step 109 to e.g. check and optionally adjust budgets, to report to higher levels in the organization (company) and so on. The information could for instance be used as a basis for determining to what level the separate organizations are using the global purchasing leverage contracts. In one way or the other, mainly the higher hierarchy wants to be informed and the several purchasing departments have to arrange this.

25 Fig. 2 schematically shows a computer system 201 arranged to execute the method according to the invention. Preferably, the computer system 201 is realized as a conventional personal computer equipped with the necessary software to execute the method on the processor(s) present in the personal computer, although of course the invention is not restricted to such an embodiment. The computer system 201 is provided with an F&A
30 module 202, and a transformation module 203, preferably realized as part of a spreadsheet application 204. This way, if the spreadsheet application 204 is executed the F&A module 202 and the transformation module 203 are loaded and can be executed easily by an operator of the computer system 201.

The F&A module 202 obtains the finance and accounting data from the general ledger accounts, and organizes it in accordance with previously established links with the UNSPSC classification, as set out above in steps 101 and 102 of Fig. 1. The results are then fed to the transformation module 203, which transforms the F&A data into NPR
5 expenditures. This has been explained above with reference to steps 104 and 106 of Fig. 1. The thusly derived estimate for the NPR expenditures (see step 108 of Fig. 1) can then be presented to the operator on the display of the computer system 201.

The present invention assumes that costs as registered by the F&A information, is considered to be equal to expenditures. This way it is easy to see how the
10 transformation can be made. If costs and expenditures are not considered equal in particular organizations, an adjustment or filtering may be necessary before applying the transformation. Also, payment conditions and moment of goods receipt are not relevant to the calculation as set out above.

With present-day ERP or other electronic information systems, it is possible to
15 download general ledger data in electronic form to the computer system 201 very easily. In most companies, employee computer systems will be connected to the internal network, and people working in accounting and/or purchasing departments will have access to the necessary information. With the use of a spreadsheet application, preferably with PivotTable functionality is very easy to calculate or transform F&A data into NPR expenditures.

20 It should be noted that the above-mentioned embodiments illustrate rather than limit the invention, and that those skilled in the art will be able to design many alternative embodiments without departing from the scope of the appended claims.

In the claims, any reference signs placed between parentheses shall not be construed as limiting the claim. The word "comprising" does not exclude the presence of
25 elements or steps other than those listed in a claim. The word "a" or "an" preceding an element does not exclude the presence of a plurality of such elements.

The invention can be implemented by means of hardware comprising several distinct elements, and by means of a suitably programmed computer. In the device claim enumerating several means, several of these means can be embodied by one and the same
30 item of hardware. The mere fact that certain measures are recited in mutually different dependent claims does not indicate that a combination of these measures cannot be used to advantage.